RHODORA, Vol. 91, No. 865, p. 153, 1989

A DEMOGRAPHIC MODEL FOR *PEDICULARIS FURBISHIAE*, WITH IMPLICATIONS FOR CONSERVATION STRATEGIES

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ABSTRACT

Four years of demographic data on over 5000 individuals of *Pedicularis furbishiae* provided size-specific survivorship and fecundity estimates used to model the population dynamics of this endangered plant. Survivorship and fecundity varied not only with size, but also with the population's environment, particularly the soil moisture level and time since disturbance of its riparian habitat. The model used to investigate population dynamics incorporated these effects, and added stochastic disturbance-caused mortality. Under observed frequencies and intensities of disturbance, the model predicted that few populations would remain extant for more than 30 years and that populations on drier sites would be even shorter-lived. Conservation of *P. furbishiae* thus relies on maintenance of stretches of suitable habitat for the establishment of new colonies. A protection approach limited to currently extant colonies would be unlikely to succeed.

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